

**Notice of Allowability**

Application No.

10/507,971

Examiner

James D. Ewart

Applicant(s)

PALENIUS ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE dated April 4, 2007.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date July 5 2005
4. ☒ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***Allowable Subject Matter***

1. Claims 1-14 are allowed. The reason for allowable subject matter is discussed below:

Referring to claims 1 and 8, the references cited do not teach a method of defining an uplink transmission frame timing, for use in a mobile communications system in which a user equipment may have radio links with a plurality of cells, and in which the cells with which the user equipment has radio links define an active set, wherein the uplink transmission frame timing is defined with reference to the downlink transmission frame timing of a reference cell selected from said active set, the method comprising: ***when the reference cell is removed from the active set, defining a virtual reference cell, the timing of which is defined with reference to one of the cells remaining in the active set, such that the timing of the virtual reference cell corresponds to the timing of the previous reference cell; and defining the uplink transmission frame timing relative to the timing of the virtual reference cell.*** The virtual reference cell is described in figures 3(a) – 3(f) in which the mobile device starts off with one base station in the active set and transmits (32)  $T_0$  after the reception of the downlink (31). When the mobile device moves into an area in which the cells overlap, the mobile station includes 2 more base stations in its active set Figures 3(c-d) and receives downlink signals 34 and 35 as well and continues to transmit  $T_0$  after the reception of the downlink (31 shown now as 33). When the reference cell is removed from the active set Figures 3(e-f), downlink 35 is used as a reference for the original reference and the original reference, which has been removed from the active list, continues to be a virtual reference and the mobile station transmits  $T_0$  after the virtual reference. This does not require synchronizing to a new reference. Blanz et al teaches when the reference is removed

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from the active list, using one from the active list that most nearly resembles the original reference and requires synchronizing to the new reference (0012 & 0038). Moulisley et al teaches allowing the offset to be  $T_o + \tau$  from the reference when in the soft handoff area (0040 – 0051), and does not teach a using a virtual reference when the original reference is removed.

*Conclusion*

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Ewart whose telephone number is (571) 272-7864. The examiner can normally be reached on M-F 7am - 4pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.



James Ewart  
April 19, 2007



WILLIAM TROST  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600